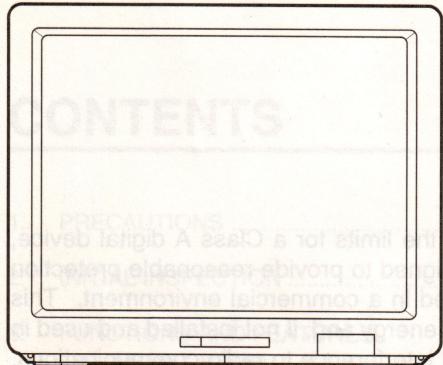




COLOR MONITOR OPERATION MANUAL

MODEL
AM-4201R



4. CONNECTING THE MONITOR TO YOUR EQUIPMENT

5. SETTING THE MENU

FEATURES:

1. Automatic tracking of horizontal and vertical scanning frequencies.
 $f(H) = 15.7/20 - 64\text{kHz}$
 $f(V) = 45 - 120\text{Hz}$
2. 0.96mm (center) stripe pitch and tinted glass 40 inches viewable CRT.
Equipped DBF (Dynamic Beam Focus)
3. Various Input Compatibility
 - NTSC/PAL/SECAM/NTSC4.43/Composite Video, S-Video
 - RGB ANALOG
 - RGB TTL
4. Easy to operate microcomputer and wireless remote control
5. RS-232C Interface
6. Optimum picture setup using max. 32 memory modes



MITSUBISHI
MITSUBISHI ELECTRONICS AMERICA, INC.
9665 Plaza Drive, San Diego, CA 92126
CYPRESS, CALIFORNIA USA



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

FCC COMPLIANCE NOTICE

NOTE:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his or her own expense.

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

2. INITIAL INSPECTION

1. PRECAUTIONS

Carefully unpack the monitor and compare your set to the following description.

Congratulations

On your selection of MITSUBISHI COLOR MONITOR AM-4201R. You have acquired a product that will greatly enhance your video pleasure. Because of the sophistication of this advanced electronic device, we recommend that you thoroughly understand the contents of this operation and installation manual before using.

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1. PRECAUTIONS

In the interest of safety, please observe the following precautions.

NEVER REMOVE THE BACK COVER

The high voltage circuit will be exposed.

A careless touch may cause an electrical shock.

PROTECT THE POWER CORD

Damage to the power cord may cause fire or shock hazard.

When unplugging monitor, hold power cord by the plug only and remove carefully.

MAINTAIN GOOD VENTILATION

Ventilation slots and holes are provided on the top, rear sides, and bottom of this unit.

Place the unit on a hard and level surface, and locate at least 4 inches from walls to ensure proper ventilation.

NEVER INSERT ANY OBJECT INTO THE UNIT

Foreign objects of any kind inserted into this unit constitute a safety hazard and may cause extensive damage.

DO NOT PLACE ANYTHING ON THE MONITOR

Heavy objects placed on the monitor may cause damage or obstruct proper ventilation.

Do not place on this unit any receptacle such as a vase or glass which contains any liquid.

Using this unit with water or any liquid which might spill into the unit may cause fire and electric shock.

DO NOT SUBJECT THE SET TO IMPACT OR MECHANICAL SHOCK

Take care not to drop or otherwise jar the monitor when you carry it.

Special attention should be given to protecting the CRT.

BE CAREFUL REGARDING MAGNETIC INFLUENCES

Placing a magnet, speaker system, printer, or floppy disk that will generate magnetism, near the display unit, may cause discoloration.

Your attention is called to this point.

DO NOT USE IN THE WRONG PLACE

Please refrain from subjecting the unit to vibration or where hydrogen sulfide or sulfur oxide is present.

CARE OF THE CABINET

Unplug and clean with a soft cloth slightly moistened with a mild soap and water solution.

Allow to dry completely before operating.

Never use petroleum base solutions or abrasive cleaners.

DO NOT PLACE THE MONITOR ON AN UNSTABLE CART, STAND, OR TABLE

The monitor may fall and cause serious injury to users or serious damage to the appliance.

Please use only with a stable cart, stand, or table.

The appliance and cart combination should be moved with care.

Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

DO NOT HOLD THE SPEAKERS

Holding the speakers during carrying may cause damage to the monitor and injury to users.

Hold the handles when you carry the monitor.



S3126A

2. INITIAL INSPECTION

Therefore, the following instructions apply to both:

① Main parts Carefully unpack and inspect the monitor and accompanying parts.

Use to compare your parts with those shown below.

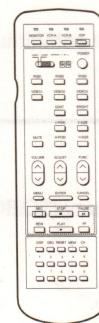
② Power cord

Use to turn the monitor on and off in fully operational conditions.

③ When the monitor is connected to a power source, the monitor



AM-4201R



Remote control

④ Volume control

Use to adjust the volume level.

⑤ Input select button (DISPLAY).

Use to switch between the INPUT1, INPUT2, VIDEO1, VIDEO2, and RGB modes.

⑥ Function buttons (USER1, USER2, USER3, USER4, USER5, USER6)

Use to memorize the user settings and to select the menu mode by one.

⑦ When the monitor is connected to a power source, the setting value is changed.

⑧ Brightness button

Use to select items of the menus.

⑨ Contrast button

Use to adjust contrast level.

⑩ Adjust button (ADJUST)

Use to adjust the level of the selected picture adjustment function, and to select ON/OFF and levels in the



Power cord

⑪ Control buttons (ADJUST)

Use to adjust contrast level.

⑫ After pressing the ADJUST button, the ADJUST buttons are used to make the horizontal correction.

⑬ Degauss button (DEGAUSS)

Use to remove the magnetic field from the monitor.

⑭ 4 Batteries

Use to power the remote control.

⑮ Operation manual

Use to read the instructions for the monitor.

⑯ Warranty card

Use to receive the guarantee.

⑰ Menu buttons

Use to move the cursor and to exit from the menu modes.

⑱ Function buttons (USER1, USER2, USER3, USER4, USER5, USER6)

Use to memorize the user settings and to select the menu mode.

⑲ Cancel button (CANCEL)

Use to cancel the setting when the letters are shown yellow.

⑳ Reset button (RESET)

When pressing the RESET button twice, all adjustments return to their preset positions.

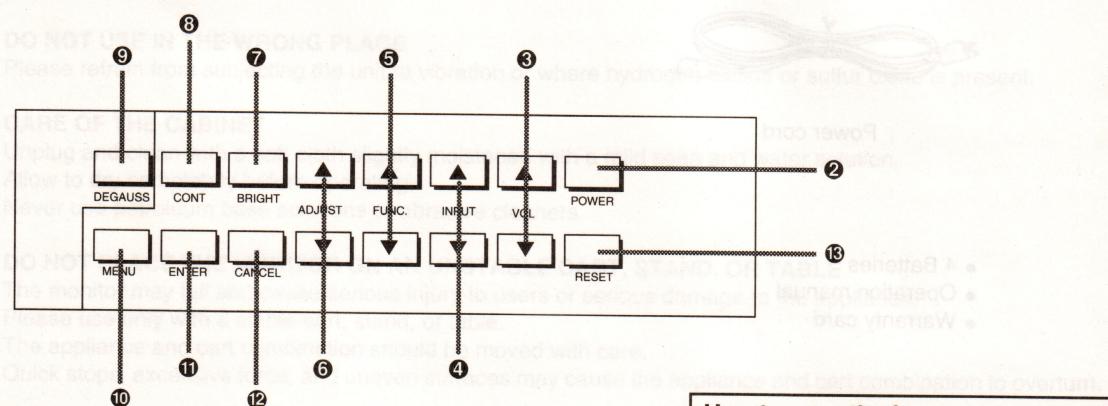
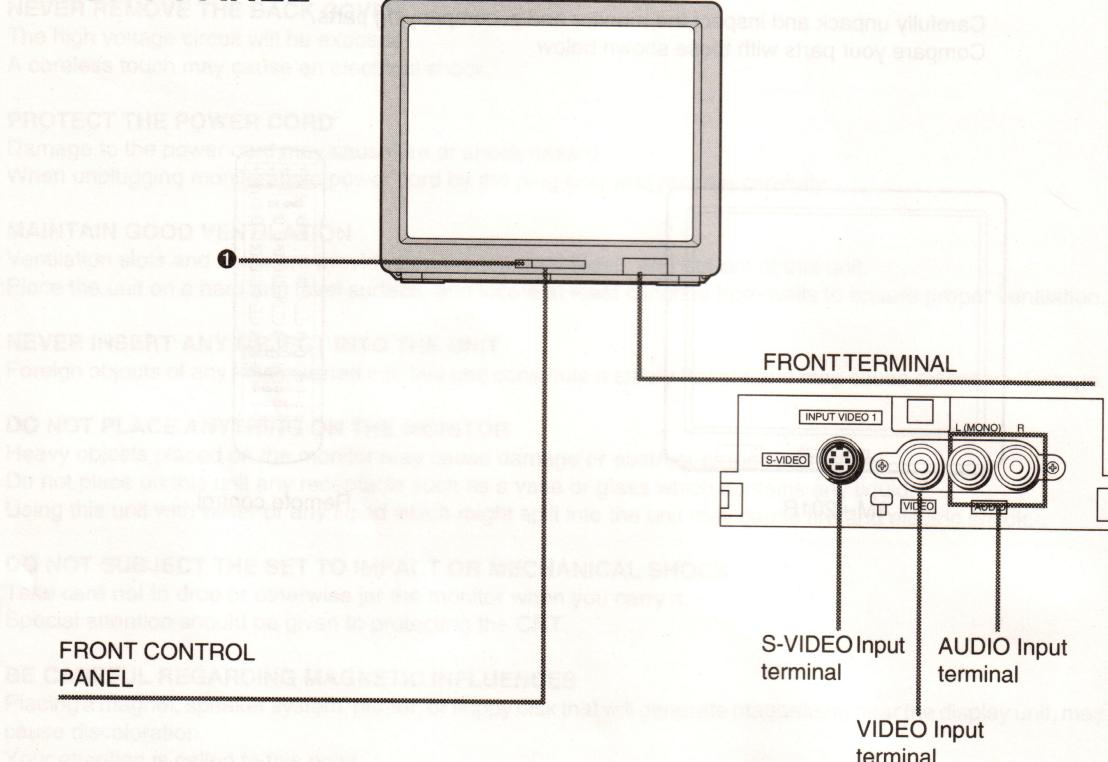
When held for 5 seconds, the letters on the screen are shown in yellow.

When held for 10 seconds, the initial setting (factory setting) is restored.

Press the CANCEL button to cancel resetting when the letters are shown yellow.

3. FUNCTIONS AND FEATURES

FRONT PANEL



DO NOT HOLD THE SPEAKERS
Holding the speakers while carrying the monitor may cause damage to the monitor.

How to open the front control panel
Press the center of the front control door (marked "PUSH") to release the door.
To close, push it forward.

The function of the front control panel and the wireless remote control are the same.
Therefore, the following descriptions apply to both.

① Main power button (MAIN POWER)

Use to turn the MONITOR on or off. When the main power button is ON, the power indicator illuminates in red and the monitor is in stand-by condition.

② Power button (POWER)

Use to turn the MONITOR on or off to a fully operational condition.

When the power button is ON in stand-by condition, the power indicator illuminates in green.

③ Volume button (VOL)

Use to adjust the volume level.

④ Input signal select button (INPUT)

Use to select the input signal (RGB1, RGB2, RGB3, VIDEO1, VIDEO2, VIDEO3) you wish to display on the monitor.

⑤ Function button (FUNC)

- Use to display the following picture adjustment functions one by one.

When pressing the ADJUST button, the setting value is changed.

RGB modes: BAS/TREBLE/BAL/H-SIZE/H-POSI/V-SIZE/V-POSI

VIDEO modes: BAS/TREBLE/BAL/PIX/COL/TINT/NR/TEMP

- Use to select items of the menus.

See page 19.

⑥ Adjust button (ADJUST)

Use to adjust the level of the selected picture adjustment function, and to select ON/OFF and letters in the menu modes.

⑦ Brightness button (BRIGHT)

Use to adjust brightness level.

After pressing the BRIGHT button, the ADJUST buttons are used for the level control.

⑧ Contrast button (CONT)

Use to adjust contrast level.

After pressing the CONT button, the ADJUST buttons are used for the level control.

⑨ Degauss button (DEGAUSS/DEG)

Use to degauss the CRT and correct color impurity.

⑩ Menu button (MENU)

Use to show menu modes, and to exit from the menu modes.

⑪ Enter button (ENTER)

Use to determine the function in the menu modes, and to memorize the RGB signal (see page 24).

⑫ Cancel button (CANCEL)

Use to cancel the setting in the menu mode.

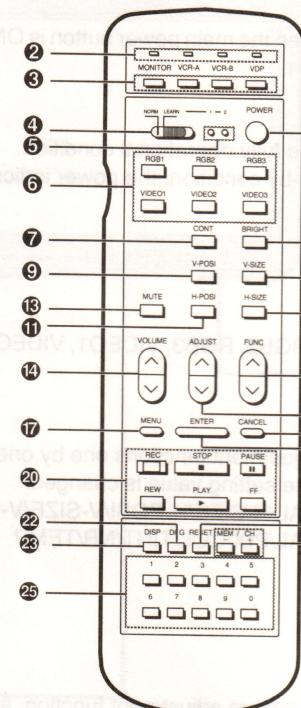
⑬ Reset button (RESET)

When pressing the RESET button twice, all adjustments returns to their preset positions. (When first pressed, the letters on the screen are shown in yellow. When secondly pressed, the initial setting returns.)

Press the CANCEL button to cancel resetting when the letters are shown yellow.

REMOTE CONTROL

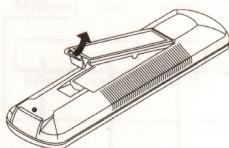
FRONT PANEL



FRONT CONTROL PANEL

PREPARATION FOR THE REMOTE CONTROL SAFETY PRECAUTIONS

① Remove the cover of the remote control by pulling out in the direction of the arrow.

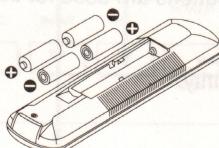


CAUTION:

Avoid dropping the remote control on a hard surface.



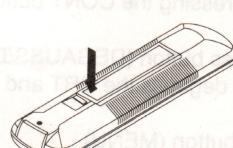
② Load the four batteries, making sure that they are positioned correctly (+ to +, - to -).



Do not allow the remote control to get wet or become heated.



③ Replace the cover sliding both sides of the cover into the slots of the remote control.



Use only a soft, slightly moistened cloth for cleaning.



REAR PANEL

REMOTE CONTROL FUNCTIONS

① Power button (POWER)

Use to turn the MONITOR on or off in stand-by condition.

② Page indicators

When pressing remote control buttons to operate another equipment, the corresponding page indicator illuminates.

③ Page select buttons

In the "Normal" mode, press to choose the component to be operated: MONITOR, VCR-A, VCR-B or VDP. In the "Learn" mode, press to choose the position for learning other remote's codes. (See page 28 for details.)

④ Normal/Learning switch

For normal use, set to the "NORM" position. Set this switch to "LEARN" position to place remote control learning mode.

⑤ Learning indicators

The learning indicator illuminates when programming the remote control.

⑥ Input signal select buttons

Use to directly select the input signal (RGB1, RGB2, RGB3, VIDEO1, VIDEO2, VIDEO3) you wish to display on the monitor.

⑦ Contrast button (CONT)

Use to adjust contrast level.

After pressing the CONT button, the ADJUST buttons are used for the level control.

⑧ Brightness button (BRIGHT)

Use to adjust brightness level.

After pressing the BRIGHT button, the ADJUST buttons are used for the level control.

⑨ Vertical position button (V-POSI)

Use to adjust the vertical position of the picture only in the RGB mode.

After pressing the V-POSI button, the ADJUST buttons are used for the level control.

⑩ Vertical size button (V-SIZE)

Use to adjust the vertical size of the picture only in the RGB mode.

After pressing the V-SIZE button, the ADJUST buttons are used for the level control.

⑪ Horizontal position button (H-POSI)

Use to adjust the horizontal position of the picture only in the RGB mode.

After pressing the H-POSI button, the ADJUST buttons are used for the level control.

⑫ Horizontal size button (H-SIZE)

Use to adjust the horizontal size of the picture only in the RGB mode.

After pressing the H-SIZE button, the ADJUST buttons are used for the level control.

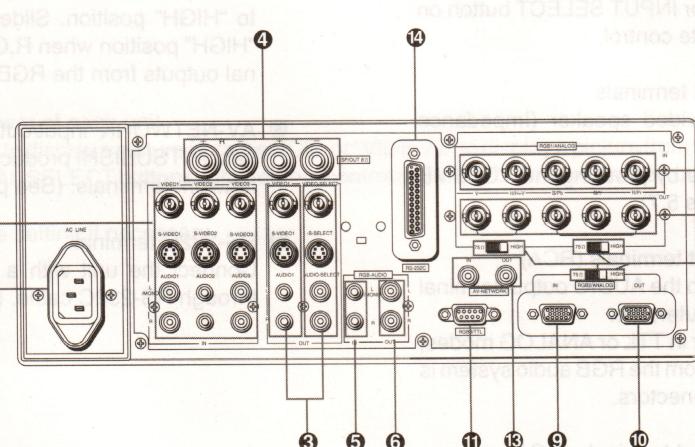
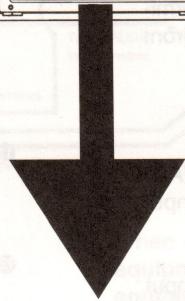
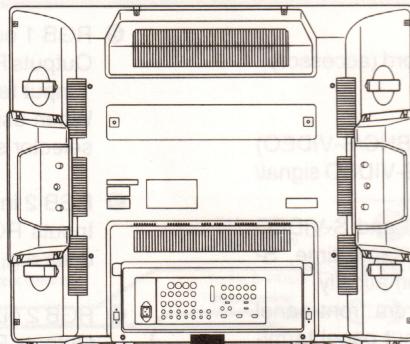
REMOTE CONTROL

REMOTE CONTROL FUNCTIONS

- ⑬ Mute control (MUTE)
Use to turn the sound off completely, press again to restore sound.
- ⑭ Volume control (VOL)
Use to adjust the volume level.
- ⑮ Adjust button (ADJUST)
Use to adjust the level of the selected picture adjustment function, and to select ON/OFF and letters in the menu modes.
- ⑯ Function button (FUNC)
 - Use to display the following picture adjustment functions one by one.
RGB modes: BAS/TREBLE/BAL
VIDEO modes: BAS/TREBLE/BAL/PIX/COL/TINT/NR/TEMP
- ⑰ Menu button (MENU)
Use to show the menu modes, and exit from the menu mode.
- ⑱ Cancel button (CANCEL)
Use to cancel the setting in the menu mode.
- ⑲ Enter button (ENTER)
Use to determine the function in the menu modes, and to memorize the RGB signal.
See page 24.
- ⑳ VCR/VDP control buttons
Use to operate VCR or Video disk player.
- ㉑ Reset button (RESET)
When pressing the RESET button twice, all adjustments returns to their preset positions. (When first pressed, the letters on the screen are shown in yellow, when secondly pressed, the initial setting returns.)
Press the CANCEL button to cancel resetting when the letters are shown yellow.
- ㉒ Degauss button (DEGAUSS/DEG)
Use to degauss the CRT and correct color impurity.
- ㉓ Display button (DISP)
Use to show on screen the present operating status such as the selected input terminal and the type of the input signal.
- ㉔ Memory buttons (MEM/CH)
Use to select the memorized data of each memory number in RGB mode.
See pages 24 ~ 25.
- ㉕ Number buttons
Use to input the ID number of the monitor you desire to control.
See page 26.

REAR PANEL

CONNECTING THE MONITOR TO YOUR EQUIPMENT



① Power Inlet

This inlet connects to power cord (accessory). Insert cord firmly.

② VIDEO 1/2/3 input terminals (BNC/S-VIDEO)

Input composite video signal/S-VIDEO signal/ audio signal (L and R).

When composite video signal and S-VIDEO signal are connected at the same time, S-VIDEO signal is selected automatically.

Also, when inputting signal from front panel terminals and rear video 1 input panel terminals at the same time, the signal from front panel terminals is selected automatically.

③ VIDEO output terminals**A) VIDEO output terminal**

Directly outputs the VIDEO/S-VIDEO/AUDIO input signal fed from VIDEO 1 input terminal.

B) VIDEO select terminal

Outputs the VIDEO/S-VIDEO/AUDIO input signal selected with INPUT button on front panel control or INPUT SELECT button on wireless remote control.

④ SPEAKER output terminals

Connect the provided speaker (Impedance 8Ω).

Adjust the volume by pressing the VOLUME button. (See pages 5,7)

⑤ RGB AUDIO input terminals (RCA)

Connect directly to the AUDIO output terminal of personal computer, etc.

In operating either in TTL or ANALOG modes, the audio output from the RGB audio system is input to these connectors.

⑥ RGB AUDIO output terminals (RCA)

Directly outputs the input signal fed from RGB AUDIO input terminal.

⑦ RGB 1 input terminals (BNC)

Inputs RGB ANALOG signal of RGB analog units e.g, personal computer etc..

⑧ RGB 1 output terminals

Outputs RGB ANALOG signal input from RGB 1 input terminals.

When using this terminal, set the impedance selector switch to the "HIGH" position.

⑨ RGB 2 input terminals (shrink D-SUB 15 pin)

Inputs RGB ANALOG signal of RGB analog units e.g, personal computer etc..

⑩ RGB 2 output terminals (shrink D-SUB 15 pin)

Outputs RGB ANALOG signal input to RGB 2 input terminals.

When using this terminal, set the impedance selector switch to the "HIGH" position.

⑪ RGB 3 input terminals (D-SUB 9pin)

Input RGB TTL signal of RGB TTL units e. g, personal computer etc.. (See page 32)

⑫ Impedance selector switch

Normally set the switch on the RGB side to the "75Ω" position and the switch on the sync. side to "HIGH" position. Slide the selector to the "HIGH" position when R,G/G+SYNC or B signal outputs from the RGB output terminals.

⑬ AV-NETWORK input/output terminals

Connect MITSUBISHI products equipped with AV network terminals. (See page 18)

⑭ RS-232C terminal

Connect the unit with a personal computer through RS-232C cable. (See pages 30-34)

Numbered buttons

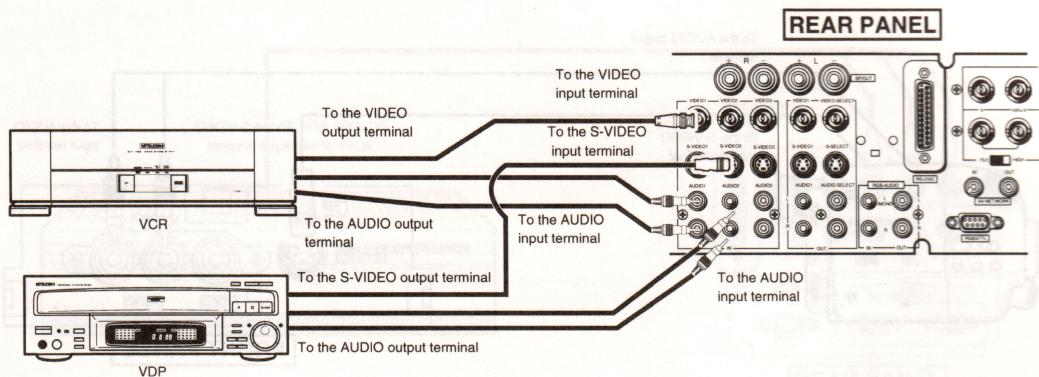
Use to make the connection to the monitor you desire to connect.

See page 26

4. CONNECTING THE MONITOR

Connection with TO YOUR EQUIPMENT

Ⓐ VCR/VDP



- When connecting the unit to another equipment, be sure to switch off each equipment.

- Switch on the power of each unit.
- Select "VIDEO 1" to display a picture from the VCR, or "VIDEO 2" to display a picture from the VDP, by pressing the INPUT SIGNAL SELECT button on the remote control or the INPUT button on the front control panel. (See pages 5.7.)
- Adjust the picture setting if necessary.

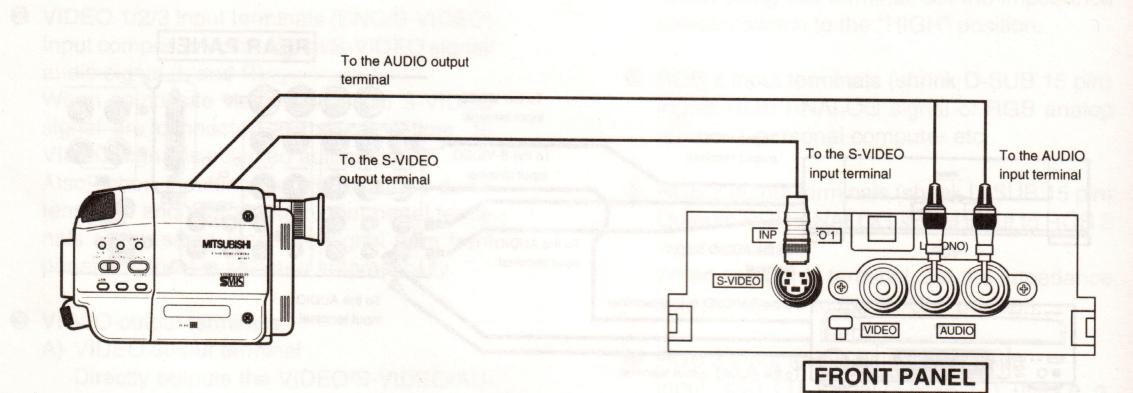
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on the front control panel.

- Display the SETUP MENU and set the "S-VIDEO" to "VIDEO 1". *visasasian # grimes studioq arti taubA. ☺*
A picture from the Mac-II is displayed and the memory number is shown.
- Set the CLAMP to "BLACK POSITION" in the MENU.
(See page 20.)
- Press the MENU button.
The menu will be closed.
- Adjust the picture setting if necessary.
- Press the ENTER button to make some of picture settings.
- Display the MENU on the screen and set the "MEMORY NAME" if necessary. (See page 20.)

A. CONNECTING THE MONITOR TO YOUR EQUIPMENT

② VIDEO CAMCORDER



② Directly outputs the VIDEO or S-VIDEO signal fed from VIDEO 1 input terminal. Outputs the VIDEO signal fed from VIDEO 1 input terminal. Outputs the S-VIDEO signal selected with INPUT button on the front control panel or INPUT SELECT button on the remote control.

③ S-VIDEO output terminals

- 1 Switch on the power of each unit.
- 2 Select "VIDEO 1" to display a picture from the video camcorder, by pressing the INPUT SIGNAL SELECT button on the remote control or the INPUT button on the front control panel.

- When connecting the unit to another equipment, be sure to switch off each equipment.

When the video camcorder is connected with the front input terminal and rear Video 1 input terminal of the unit at the same time, the front input terminal is given priority.

- 3 Adjust the picture setting if necessary.

④ RGB 1 output terminals (RCA)

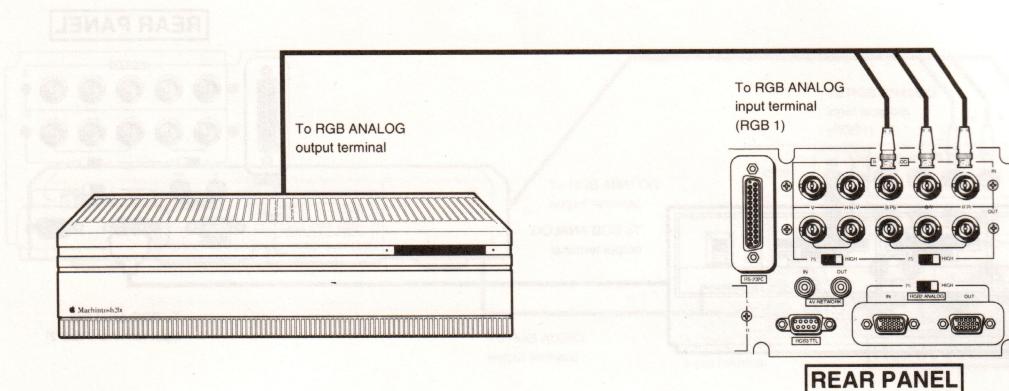
Directly outputs the video signal fed from RGB 1 input terminal.

⑤ RGB 1 input terminals (RCA)

Inputs RGB 1 output signal of RGB analog units and personal computers.

Connection with RGB ANALOG Signal Equipment

© MAC-II (SYNC ON GREEN)

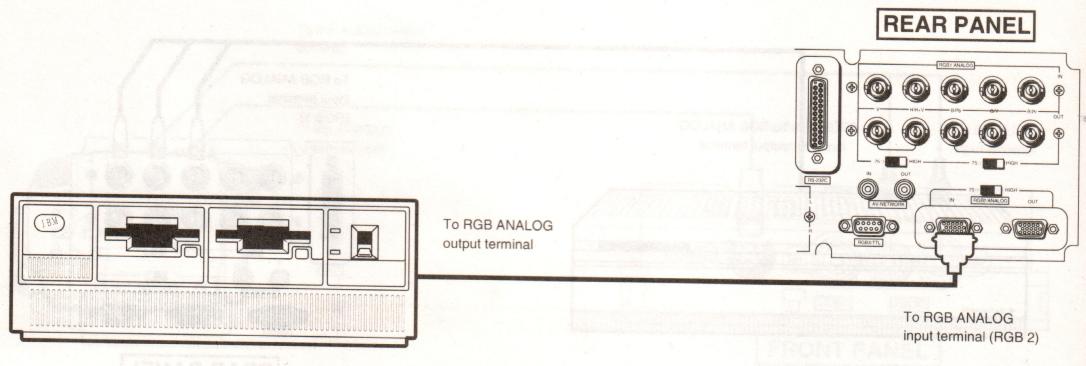


- When connecting the unit to another equipment, be sure to switch off each equipment.

- ① Set the impedance selector switch on the RGB side to the "75 Ω".
- ② Switch on the power of each unit.
- ③ Select "RGB 1" by pressing the INPUT SIGNAL SELECT button on the remote control or the INPUT button on the front control panel.
- ④ Display the SETUP MENU and set the SYNC. SEL to "SYNC ON GREEN". (See page 22.)
- ⑤ Set the CLAMP to "BACK PORCH" in the MENU .
- ⑥ Press the MENU button.
- ⑦ The menu will be closed.
- ⑧ Adjust the picture setting if necessary.
- ⑨ Press the ENTER button to memorize all picture settings.
- ⑩ Display the MENU on the screen and set the "MEMORY NAME" if necessary. (See page 20.)

Connection with RGB ANALOG Signal Equipment

④ PS/2



When connecting the unit to another equipment, be sure to switch off each equipment.

- When connecting the unit to another equipment, be sure to switch off each equipment.

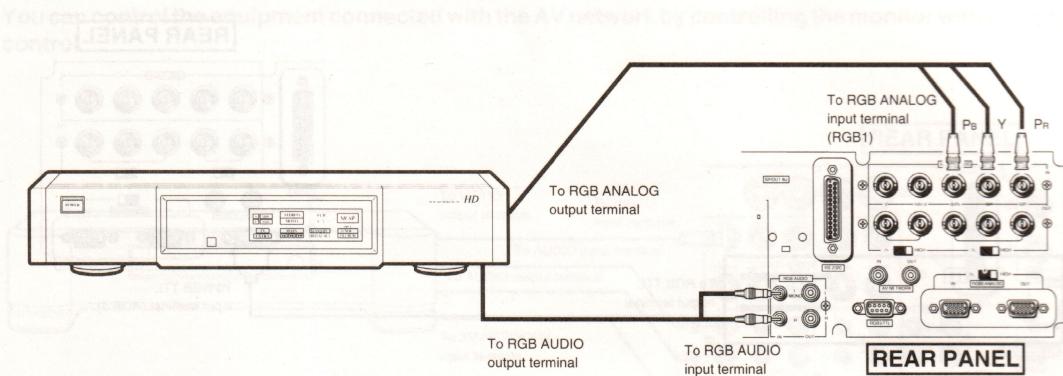
④ Switch on the power of each unit.

⑤ Select "VIDEO 1" to display a picture from the video equipment. (See page 20.)

- Set the impedance selector switch to "75Ω".
- Switch on the power of each unit.
- Select "RGB 2", by pressing the INPUT SIGNAL SELECT button on the remote control or the INPUT button on the front control panel.
- A picture from the P/S-II is displayed and the memory number is shown.
- Adjust the picture if necessary.
- Press the ENTER button to memorize all picture settings.
- Display the MENU on the screen and set the "MEMORY NAME" if necessary. (See page 20.)

Connection with RGB ANALOG Signal Equipment

⑤ HI-VISION (Y, Pb, Pr)

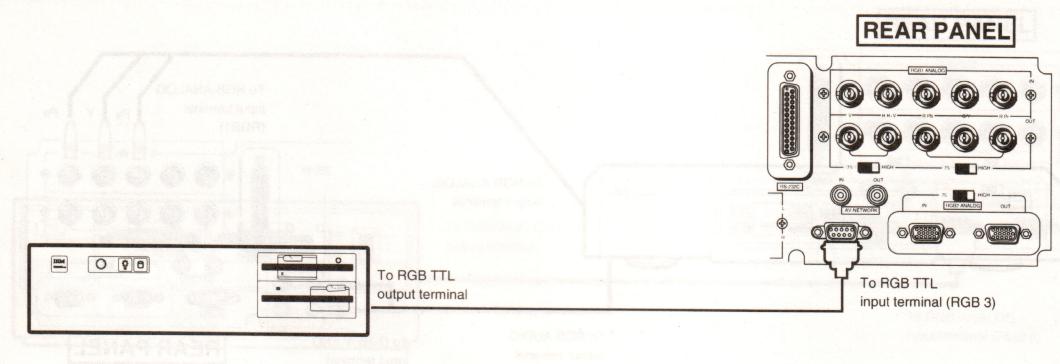


- When connecting the unit to another equipment, be sure to switch off each equipment.

- Set the impedance selector switch to "75Ω".
- Switch on the power of each unit.
- Select "RGB 1", by pressing the INPUT SIGNAL SELECT button on the remote control or the INPUT button on the front control panel.
A picture from the HI-VISION is displayed and the memory number is shown.
- Set the HI-VISION to ON in the menu mode.
- Press the ENTER button to display the HI-VISION menu.
- Set the ASPECT to "16:9" or "4:3".
- Set the INPUT to "Y, Pb, Pr" according to the input signal.
- Press the MENU button.
The menu will be closed.
- Adjust the picture if necessary.
- Press the ENTER button to memorize all picture settings.
- Display the MENU on the screen and set the "MEMORY NAME" if necessary. (See page 20.)

Connection with RGB TTL Signal Equipment

(F) PC/AT



- When connecting the unit to another equipment, be sure to switch off each equipment.

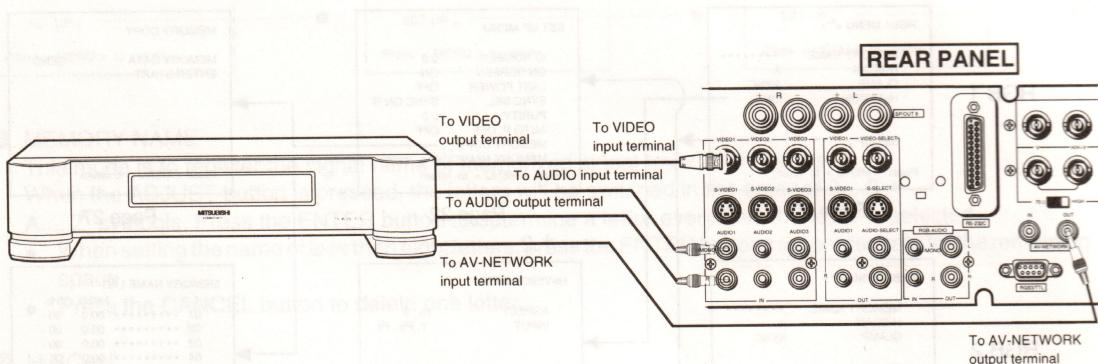
- Switch on the power of each unit.
- Select "RGB 3", by pressing the INPUT SIGNAL SELECT button on the remote control or the INPUT button on the front control panel.
- A picture from the PC/AT is displayed and the memory number is shown.
- Set the TTL COLOR to AUTO in the menu mode. (See page 20.)
- Press the MENU button.
The menu will be closed.
- Adjust the picture if necessary.
- Press the ENTER button.
- Display the MENU on the screen and set the "MEMORY NAME" if necessary. (See page 20.)

2. SETTING THE MENU

SETTING THE MENU IN RGB SIGNAL INPUT MODE

⑥ AV-NETWORK

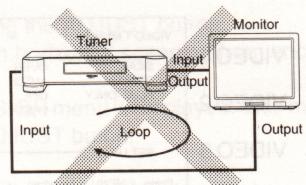
You can control the equipment connected with the AV network by controlling the monitor with the remote control.



- When connecting the unit to another equipment, be sure to switch off each equipment.

NOTE:

If connecting the monitor to other equipments so that the monitor's AV network output signal returns to the input terminal through other equipments. The monitor may not operate.



⑦ NTSC-COLOR

This mode is to set the color mode.

To change the primary color mode, the primary color mode is set to "NTSC-COLOR".

- When the color mode set to "AUTO", the color mode in EGA signal is set automatically.

⑧ SET UP

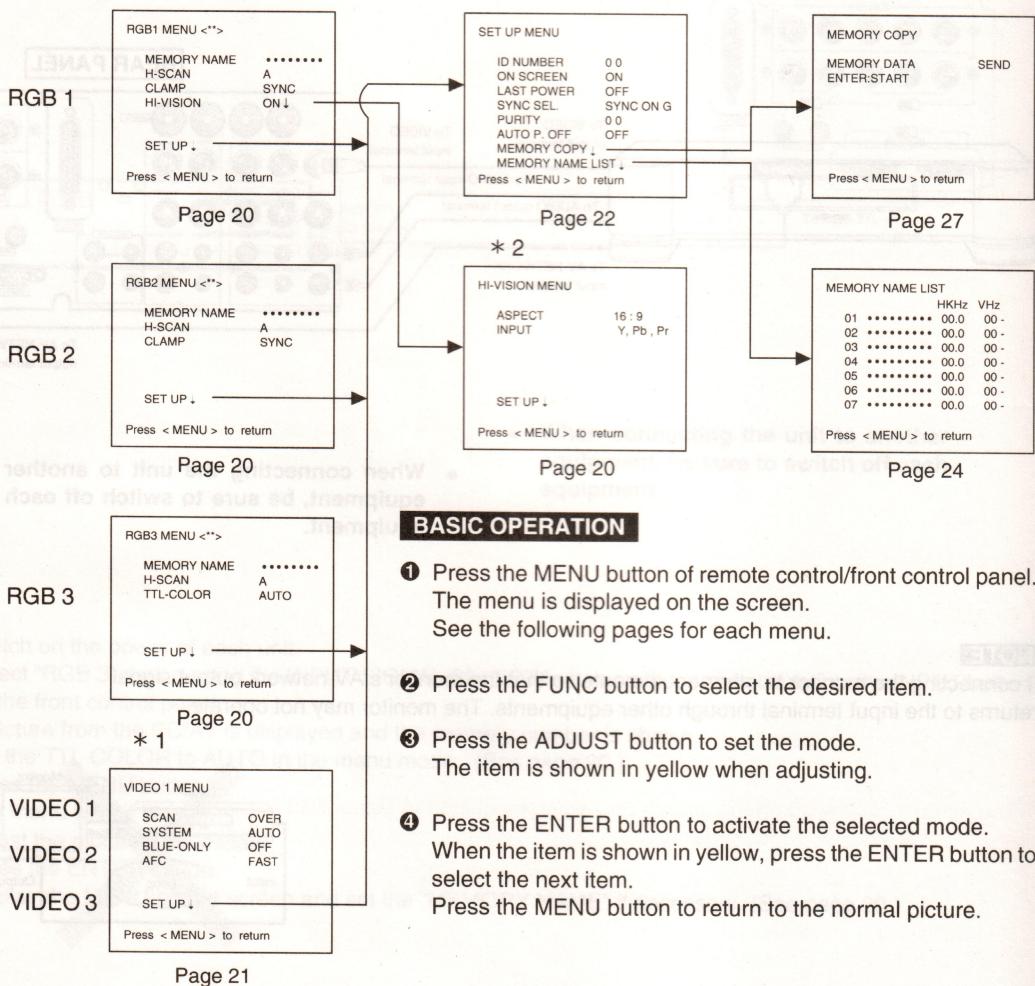
When the "SET UP" button is pressed, the "SET UP" menu is displayed.

See page 22 for details.

5. SETTING THE MENU

This unit will display the menu on the screen according to the each input terminal. You can set each of the following items in the menu mode on the screen. Follow the steps shown below to select in the menu mode.

Input terminal



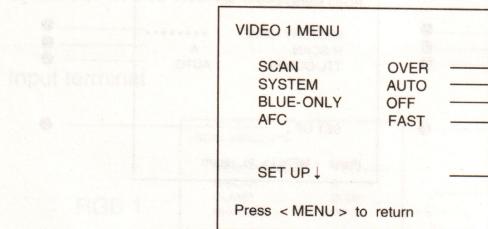
5. SETTING THE MENU

SETTING THE MENU

IN VIDEO SIGNAL INPUT MODE

This unit will display the menu in VIDEO mode.

You can set each of the following items in the menu mode for the video. Follow the steps shown below to select in the menu mode.



① SCAN

This mode is to select over-scan or under-scan by pressing the ADJUST button.

OVER: over-scan

UNDER: under-scan

② SYSTEM

This mode is to select the video color system.

When the ADJUST button is pressed, the display will be switched in the order of AUTO → NTSC → NTSC 4.43 → PAL → SECAM → AUTO....

- Normally, set the color system to "AUTO". If a signal is not automatically selected in the "AUTO" mode, set the system to the signal desired with the ADJUST button.

③ BLUE-ONLY (NTSC only)

This mode is to turn BLUE ONLY on or off by pressing the ADJUST button.

Turn "ON" if adjusting tints and color with the color bar VIDEO signal.

Exit from the menu mode, and B/W picture is displayed on the screen.

Adjust so that the luminance of white picture is uniform by pressing ADJUST button.

④ AFC

This mode is to select FAST or SLOW by pressing the ADJUST button if the picture is distorted when using a VCR. Select either mode that reduces the distortion.

Normally, set to "FAST".

⑤ SET UP

When the ENTER button is pressed, SET UP MENU is displayed.

See page 22 for details.

SETUP MENU

SET UP MENU	
ID NUMBER	0 0
ON SCREEN	ON
LAST POWER	OFF
SYNC SEL.	SYNC ON G
PURITY	0 0
AUTO P. OFF	OFF
MEMORY COPY ↓	
MEMORY NAME LIST ↓	

Press < MENU > to return

- The same SET UP MENU is displayed whichever terminal (RGB or VIDEO) you use.

① ID NUMBER

This mode is to set the ID number of the monitor you desire to control.

You can control more than one of several monitors with a single remote control by selecting the ID number. See page 26 for details.

Set the ID number (01-99) with the ADJUST buttons on the remote control.

② ON SCREEN

This mode is to turn the on-screen display on or off by pressing the ADJUST button.

ON: displayed

OFF: not displayed

③ LAST POWER

ON: The last operating conditions when the main power is switched off is memorized.

OFF: The last operating conditions when the main power is switched off is not memorized.

④ SYNC SEL.

This mode is to select SYNC ON GREEN or ANALOG SYNC according to the input signal by pressing the ADJUST buttons.

SYNC ON GREEN: The green output signal including the sync.

ANALOG: The analog sync signal including the sync.

- When inputting TTL level sync signal at the same time, TTL sync signal is given priority.

⑤ PURITY

This mode is to adjust color purity.

When the ADJUST (UP) button is pressed, the display will be switched in the order of 00 → S1 → S30 → S31.

When the ADJUST (DOWN) button is pressed, the display will be switched in the order of 00 → N1 → N30 → N31.

See page 23.

⑥ AUTO POWER OFF

This mode is to turn off the monitor automatically after a predetermined period without input signal.

When the ADJUST button is pressed, the display will be switched in the order of OFF → 5min → 10min → 15min → 20min → → 20min → 60min. (every 5 minutes)

⑦ MEMORY COPY

This mode is to copy the contents of the user setting to monitors (AM-4201R).

When the ENTER button is pressed, MEMORY COPY MENU is displayed.

See page 27.

⑧ MEMORY NAME LIST

This mode is to display the list of memorized signal name, frequencies or input terminal on the screen when pressing ENTER button.

See page 24.

Adjusting the color purity

This color monitor has a large screen picture tube and color purity may be affected slightly by the earth's magnetic field. For best results, follow the instruction below for color purity adjustment.

- 1 Select "PURITY" in the SETUP MENU by pressing the FUNCTION button.

SET UP MENU	
ID NUMBER	0 0
ON SCREEN	ON
LAST POWER	OFF
SYNC SEL.	SYNC ON G
▷ PURITY	0 0
AUTO P. OFF	OFF
MEMORY COPY ↓	
MEMORY NAME LIST ↓	
Press < MENU > to return	

- 2 Adjust the color purity (N31 - S31) so that the screen is uniformly blue by pressing the ADJUST button.

SET UP MENU	
ID NUMBER	0 0
ON SCREEN	ON
LAST POWER	OFF
SYNC SEL.	SYNC ON G
▷ PURITY	S20
AUTO P. OFF	OFF
MEMORY COPY ↓	
MEMORY NAME LIST ↓	
Press < MENU > to return	

- 3 Press the FUNCTION button when the screen turns blue.
- Every time the FUNCTION button is pressed, the background color on the screen turns red, blue and green.
- 4 Make sure that the screen color is even especially on the corner of the screen whenever color is not pure, adjust color purity so that each color is even.
- Color may be affected depending on the installation place (e.g.the place subject to the magnetic field like buildings).
- 5 Press the ENTER button.
- 6 If color purity is not corrected by the above adjustment, press the DEGAUSS button on the front control panel or on the remote control.

NOTE:

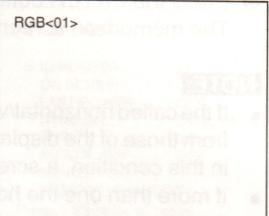
- Adjust color purity whenever the monitor is installed in a different place.
- Purity adjustment cannot be operated for approx. 10 seconds after pressing the DEGAUSS button.

RGB MEMORY

This monitor's microcomputer can memorize max. 32 kinds of optimum screen conditions (size, brightness, etc.) suitable for each connected equipment.

Memorizing the screen conditions

- ① Display the picture of RGB signal on the screen.
- The memory number is shown in yellow on the screen.
- ② Adjust the size, brightness, etc. of the displayed picture according to your preference.
- ③ Press the ENTER button.
- The memory number is memorized.
The memory number turns white after memorized.
Memorize the memory name in the "MEMORY NAME" of the menu, if necessary.
(See page 20)



NOTE:

The monitor detects the horizontal/vertical frequencies, the polarity of the sync. signal and the input terminal to find whether the screen condition has already been memorized. Therefore, if a connected equipment has the similar signal (horizontal/vertical frequencies, the polarity of the sync. signal and the input terminal) to that of the memorized equipment, the memorized screen condition may be called automatically.

The 33rd memory number cannot be memorized though shown on the screen. If necessary, memorize the a new screen condition by erasing the unnecessary number. (See page 25 "Canceling the memory number".)

MEMORY LIST

- The memorized screen condition list (memory name, horizontal/vertical frequencies, the polarity of the sync. signal and input terminal) is displayed.
- The vertical frequencies of more than 100Hz are shown in double figures.
- The display of horizontal/vertical frequencies is a rough value for detecting the RGB signal.

Memory number	MEMORY NAME LIST		
	Signal name	Horizontal frequency	Vertical frequency
01	MAC2	35.0	67.1
02	PS/2	31.5	59.2
03	.....	00.0	00
04	.....	00.0	00
05	.....	00.0	00
06	.....	00.0	00
07	.....	00.0	00

Press < MENU > to return

MEMORY LIST	
01	35.0
02	31.5
03	.....
04	.....
05	.....
06	.....
07	.....

MEMORY LIST	
01	35.0
02	31.5
03	.....
04	.....
05	.....
06	.....
07	.....

Adjusting the color purity

RGB MEMORY

Calling the memory number

If the memory number is not called automatically, follow the instruction below.

- 1 Display the memory number on the screen by pressing the MEMORY SCAN button(MEM+/MEM-).
- 2 Press the ENTER button.

The memorized screen condition is called.

NOTE:

- If the called horizontal/vertical frequencies, the polarity of the sync. signal and the input terminal are different from those of the displayed picture, the memory number is shown in red. When the ENTER button is pressed in this condition, a screen condition of the displayed picture is replaced with the existing one.
- If more than one the horizontal/vertical frequencies, the polarity of the sync. signal and the input terminal of the same contents are memorized, the smaller memory number will be called.
- The memorized screen condition may not be called correctly because of change of frequencies of the signal source.

Canceling the memory number

- 1 Select "MEMORY NAME LIST" in the SETUP MENU.
(See page 22.)

SET UP MENU		
ID NUMBER	0 0	
ON SCREEN	ON	
LAST POWER	OFF	
SYNC SEL.	SYNC ON G	
PURITY	0 0	
AUTO P. OFF	OFF	
MEMORY COPY	↓	
▷ MEMORY NAME LIST ↓		
Press < MENU > to return		

- 2 Press the FUNCTION button when the cursor is on the

- 2 Press the ENTER button.

The list of memorized signals is shown on the screen.

MEMORY NAME LIST		
	kHz	kHz
01 MAC2	35.0	67 1
02 PS/2	31.5	59 2
03	00.0	00 -
04	00.0	00 -
05	00.0	00 -
06	00.0	00 -
07	00.0	00 -

Press < MENU > to return

- 3 Position the cursor on the memory number to be canceled by pressing the FUNCTION button.

- 4 Press the RESET button.

The memory number is shown in yellow.

MEMORY NAME LIST		
	kHz	kHz
01 MAC2	35.0	67 1
02 PS/2	31.5	59 2
03	00.0	00 -
04	00.0	00 -
05	00.0	00 -
06	00.0	00 -
07	00.0	00 -

Press < MENU > to return

- 5 Press the RESET button again.

The memory number is canceled.

When calling off canceling the memory number, press the CANCEL button before the step ④.

MEMORY NAME LIST		
	kHz	kHz
01 MAC2	35.0	67 1
02	00.0	00 -
03	00.0	00 -
04	00.0	00 -
05	00.0	00 -
06	00.0	00 -
07	00.0	00 -

Press < MENU > to return

6. PROGRAMMING THE REMOTE CONTROL

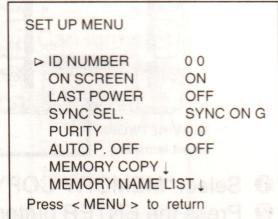
ID numbers

If installing more than one monitors in the same place, operating remote controls may interfere with each other. In this case, set the ID number for each monitor to operate the monitors individually with one remote control.

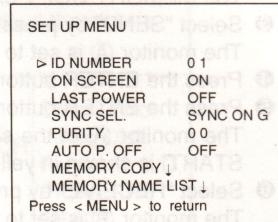
Setting the ID number

Set the ID number for each monitor using the corresponding remote control.

- ① Select "ID NUMBER" in the SETUP MENU.
(See page 22.)



- ② Input the ID number (01 - 99) by pressing the ADJUST buttons.
 - Every time the ADJUST button is pressed, the number is switched 01→02→03→...99.
 - The ID number can be inputted by pressing the number keys of the remote control while shown in yellow.
- ③ Press the ENTER button.
The inputted ID number is set.



Operating the monitors

After setting the ID number, follow the instruction below when controlling monitors with the remote control.

- ① Input the ID number of the monitor you desire to control by pressing the number keys of the remote control.
- ② Press the ENTER button.

- The ID number is shown in white on the screen and you can control the monitor of the ID number.

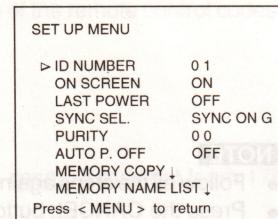
NOTE:

- Operate the remote control before the ID number shown in white disappears on the screen. After the number has disappeared, operations except ① is not received.

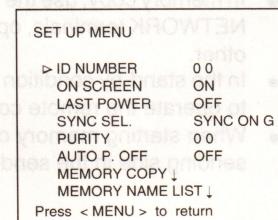
Canceling the ID number

- ① Input the ID number to be canceled by pressing number keys of the remote control.

- ② Select "ID NUMBER" in the SETUP MENU.

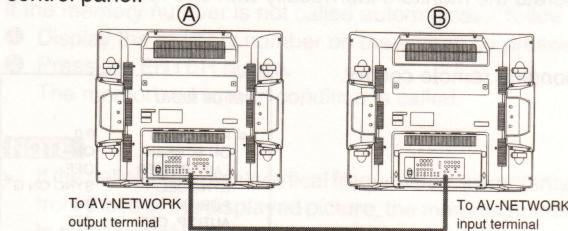


- ③ Set the ID number to "00" by pressing the ADJUST button.
- ④ Press the ENTER button.
The ID number is canceled.



Copying the user setting (Memory copy)

The user setting can be copied to monitors (model; AM-4201R). Follow the instruction below using the front control panel.



① Select "MEMORY COPY" in the SETUP MENU of the each monitor.

② Press the ENTER button.

The MEMORY COPY display is shown on the screen.

③ Select "SEND" by pressing the ADJUST button of the monitor ④.

The monitor ④ is set to the sending side.

④ Press the ENTER button of the monitor ④.

⑤ Press the ENTER button again.

The monitor ④ of the sending side becomes in the stand-by condition. "ENTER: START" is shown in yellow.

⑥ Select "RECEIVE" by pressing the ADJUST button of the monitor ⑤.

The monitor ⑤ is set to the receiving side.

⑦ Press the ENTER button of the monitor ⑤.

⑧ Press the ENTER button again.

The monitor ⑤ of the receiving side becomes in the stand-by condition. "ENTER: START" is shown in yellow.

⑨ Connect the cable between the AV NETWORK terminals.

⑩ Press the ENTER button of the monitor ⑤.

The monitor ⑤ starts to receive the user setting.

⑪ Press the ENTER button of the monitor ④.

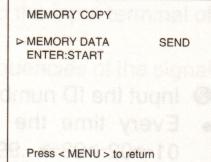
The monitor ④ starts to send the user setting.

The number 1 to 32 is displayed in order during the transmission.

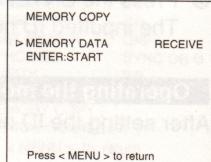
When memory copy is completed.

At this moment, "COMPLETED" appears on the screen of the monitor ⑤.

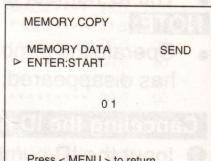
④ Source Monitor



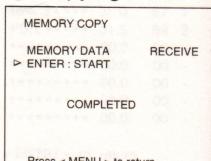
⑤ Copying Monitor



④ Source Monitor



⑤ Copying Monitor



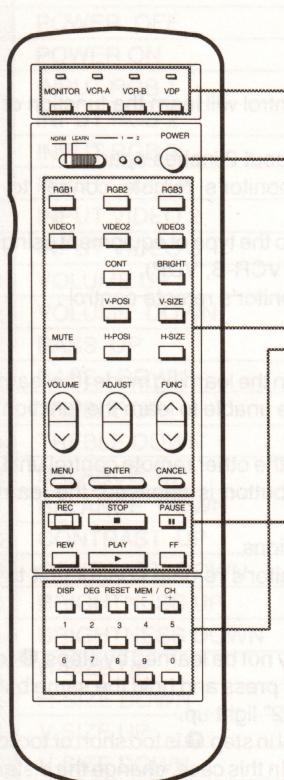
NOTE:

- Follow all the steps again if an error occurs during operating ("ERROR" is displayed).
- Press the CANCEL button to cancel the memory copy.
- In memory copy, use the front panel control. After connecting the cable between AV-NETWORK terminals, operating one monitor with the remote control will operate the other.
- In the stand-by condition ("ENTER:START" is shown in yellow) or in sending/receiving mode, it is impossible to operate the remote control.
- When starting memory copy, set the monitor of the receiving side in the receiving mode before setting the sending side in the sending mode.

6. PROGRAMMING THE REMOTE CONTROL

Functions of the remote control

Functions of the remote control can be changed by switching the pages as shown below.



	MONITOR	VCR-A VCR-B	VDP
POWER button	Can turn on or off the power of AM-4201R.	Can turn on or off the power of MITSUBISHI VCR ('86 to current models).	Can turn on or off the power of Video Disk Player (A & D, PIONEER, TEAC).
Image adjustment buttons	Can control AM-4201R and adjust the picture.		
Video/Video Disk Player buttons	Can control MITSUBISHI Video Disk Player.	Can control MITSUBISHI VCR ('86 to current models).	Can control Video Disk Player (A & D, PIONEER, TEAC).

"Page" means:

This monitor includes the function of controlling other equipments (VCR-A, VCR-B and VDP).

When using the equipments including this monitor, select each page of the one to be controlled with the page buttons.

► The remote controls which cannot learn

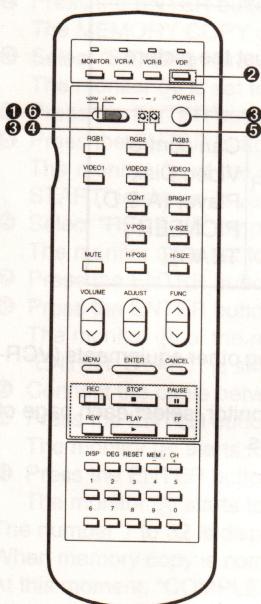
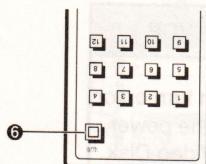
- American or European-made units which have different (frequency) modulation of the remote control codes.
- SHARP Willing TV or VCR and CD cordes of audio multi remote control.

NOTE:

- The remote control cannot learn the functions of non-infrared remote control.
- The remote control may not learn a few functions or a part of the function.
- The remote control can learn a maximum of 176 functions. However, in some cases, it may not learn 176 functions depending on the remote control to be learned.

8. PROGRAMMING THE REMOTE CONTROL

The remote control is capable of learning the functions of other remote controls you may have. This feature allows operation of other components with this remote control. For learning to take place, the other remote controls must be of the infrared type.



How to learn another unit's remote functions

Programming the remote control

The POWER button of the monitor's remote control will learn the function of the power switch of the VDP's remote control.

- ① Place the two remote controls end to end about 2 inches apart.
- ② Set the 'NORM/LEARN' switch of this monitor's remote control to the "LEARN" position.
- ③ Press the SELECT button that corresponds to the type of equipment using the other remote controls (MONITOR, VCR-A, VCR-B, VDP).
- ④ Press the desired button to learn on this monitor's remote control. The learning indicator "1" will light up.

NOTE:

If the button which cannot be learned is pressed in the learning mode (the learning indicator "1" lights up), the remote control will be unable to learn the function. In this case, press the correct button again.

- ⑤ Press and hold the corresponding button on the other remote control until the learning indicator "1" turns off. When the button is released, the learning indicator "2" will light up.
- Repeat steps ③ - ⑤ for learning other functions.
- ⑥ Set the "NORM/LEARN" switch of this monitor's remote control unit to the "NORM" position.

- Depending on the unit, some commands may not be learned by steps ① to ⑥. In this case, try steps ① - ⑤ once again, and press and hold the same button again until both learning indicators "1" and "2" light up.
- If the distance between the two remote control in step ① is too short or too long, the learning process may not be completed. In this case, change the distance between the two remote control a little and then repeat steps ② - ⑤ once again.
- The buttons can re-learn new commands by following steps ① - ⑥ again.

Cancelling the learned functions

To erase the learned function of each button:

- ① Set the 'NORM/LEARN' switch to the "LEARN" position.
- ② Pressing the button whose learned function to be erased, set the learn switch to the "NORM" position.

NOTE:

- Programming the remote controls in an area where they may not control the equipment. (Switch off the power of the equipment.)
- If the remote control is left without batteries installed for more than 1 hour, the learned functions may be erased.
- Learning does not take place if more than one button is pressed at the same time.

7. RS-232C INTERFACE

This unit can be controlled by using the personal computer equipped with the RS-232C connector.
RS-232C command

NO.	FUNCTIONS	COMMAND
1	CALL STATUS	STTS <input type="checkbox"/>
2	POWER OFF	POW0 <input type="checkbox"/>
3	POWER ON	POW1 <input type="checkbox"/>
4	INPUT RGB 1	RGB1 <input type="checkbox"/>
5	INPUT RGB 2	RGB2 <input type="checkbox"/>
6	INPUT RGB 3	RGB3 <input type="checkbox"/>
7	INPUT VIDEO1	VDO1 <input type="checkbox"/>
8	INPUT VIDEO 2	VDO2 <input type="checkbox"/>
9	INPUT VIDEO 3	VDO3 <input type="checkbox"/>
10	VOLUME UP	VOL+ <input type="checkbox"/>
11	VOLUME DOWN	VOL- <input type="checkbox"/>
12	BASS UP	BAS+ <input type="checkbox"/>
13	BASS DOWN	BAS- <input type="checkbox"/>
14	TREBLE UP	TRB+ <input type="checkbox"/>
15	TREBLE DOWN	TRB- <input type="checkbox"/>
16	BALANCE UP	BAL+ <input type="checkbox"/>
17	BALANCE DOWN	BAL- <input type="checkbox"/>
18	CONTRAST UP	CNT+ <input type="checkbox"/>
19	CONTRAST DOWN	CNT- <input type="checkbox"/>
20	BRIGHTNESS UP	BRT+ <input type="checkbox"/>
21	BRIGHTNESS DOWN	BRT- <input type="checkbox"/>
22	H-SIZE UP	HSZ+ <input type="checkbox"/>
23	H-SIZE DOWN	HSZ- <input type="checkbox"/>
24	V-SIZE UP	VSZ+ <input type="checkbox"/>
25	V-SIZE DOWN	VSZ- <input type="checkbox"/>
26	H-POSITION UP	HPO+ <input type="checkbox"/>
27	H-POSITION DOWN	HPO- <input type="checkbox"/>
28	V-POSITION UP	VPO+ <input type="checkbox"/>
29	V-POSITION DOWN	VPO- <input type="checkbox"/>
30	COLOR UP	COL+ <input type="checkbox"/>
31	COLOR DOWN	COL- <input type="checkbox"/>
32	TINT UP	TNT+ <input type="checkbox"/>
33	TINT DOWN	TNT- <input type="checkbox"/>
34	NR OFF	NZR0 <input type="checkbox"/>
35	NR ON	NZR1 <input type="checkbox"/>
36	TEMP LOW	TMP0 <input type="checkbox"/>
37	TEMP HIGH	TMP1 <input type="checkbox"/>
38	UNDER-SCAN	SCN0 <input type="checkbox"/>
39	OVER-SCAN	SCN1 <input type="checkbox"/>
40	SYSTEM AUTO	SYS0 <input type="checkbox"/>
41	SYSTEM NTSC	SYS1 <input type="checkbox"/>
42	SYSTEM NTSC 4.43	SYS2 <input type="checkbox"/>

The remote control of QSC5-232 edit only has one interface function with regard to the following edit feature. When operating other functions, refer to the main unit's manual.

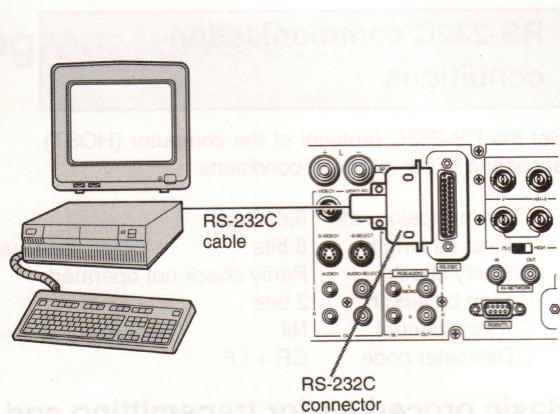
NO.	FUNCTIONS	COMMAND
43	SYSTEM PAL	SYS3 <input type="checkbox"/>
44	SYSTEM SECAM	SYS4 <input type="checkbox"/>
45	BLUE ONLY OFF	BLO0 <input type="checkbox"/>
46	BLUE ONLY ON	BLO1 <input type="checkbox"/>
47	AFC FAST	AFC0 <input type="checkbox"/>
48	AFC SLOW	AFC1 <input type="checkbox"/>
49	H-SCAN A	HSC0 <input type="checkbox"/>
50	H-SCAN B	HSC1 <input type="checkbox"/>
51	H-SCAN C	HSC2 <input type="checkbox"/>
52	CLAMP (BACK PORCH)	CLP0 <input type="checkbox"/>
53	CLAMP (SYNC)	CLP1 <input type="checkbox"/>
54	HI-VISION OFF	HVI0 <input type="checkbox"/>
55	HI-VISION ON	HVI1 <input type="checkbox"/>
56	HI-VISION INPUT RGB TTL	HIN0 <input type="checkbox"/>
57	HI-VISION INPUT Y, Pb, Pr	HIN1 <input type="checkbox"/>
58	ASPECT (4:3)	ASP0 <input type="checkbox"/>
59	ASPECT (16:9)	ASP1 <input type="checkbox"/>
60	TTL COLOR (AUTO)	TTL0 <input type="checkbox"/>
61	TTL COLOR (8)	TTL1 <input type="checkbox"/>
62	TTL COLOR (16)	TTL2 <input type="checkbox"/>
63	TTL COLOR (64)	TTL3 <input type="checkbox"/>

NOTE:

The mark “” indicates a delimiter code “CR + LF”.

ERROR	CAUSE
ER0	Command input mistake
ER1	Invalid command at present
ER2	The power is not supplied to the unit.
ER3	Inputted value is out of range

Connection with a computer through the RS-232C terminal



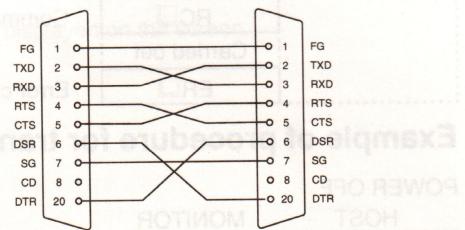
<RS-232C terminal>

RS-232C terminal is equipped with 25 pin D-SUB type/connector. The relation between each pin and signal/I/O is shown below.

► To connect computers, use the cross cable with the wiring shown in the Figure A below.

Pin no.	Signal line names	Meanings	Directions from Host
1	FG	Frame ground	—
2	TXD	Transmitted data	Output
3	RXD	Received data	Input
4	RTS	Request to send	Output
5	CTS	Clear to send	Input
6	DSR	Data set ready	Input
7	SG	Signal ground	—
8	CD	Received line signal carrier detect	Input
20	DTR	Data terminal ready	Output

Figure A



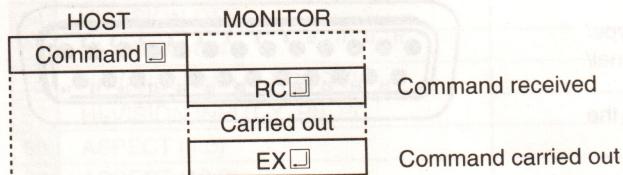
RS-232C communication conditions

Set the RS-232C protocol of the computer (HOST) according to the following conditions.

- Transmission rate 9,600bps
- Data bit length 8 bits
- Parity check Parity check not operated.
- Stop bit length 2 bits
- X flow control Nil
- Delimiter code CR + LF

Basic procedure for transmitting and receiving command

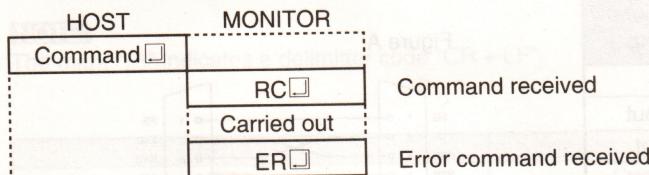
① Correct transmission and reception



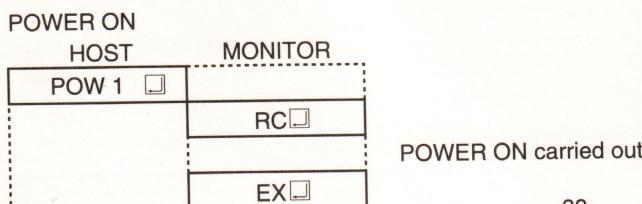
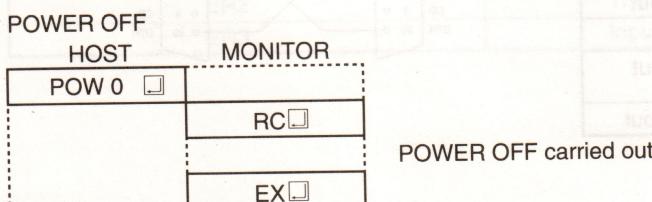
② Reception command error



③ Abnormal operation



Example of procedure for transmitting and receiving command



Example of operating program (BASIC)

```
1000  ON STOP GOSUB 9010:STOP ON
1010  'RS-232C initial setting
1020
1030  OPEN "COM1:N8NS" AS#1
1040  'key buffer clear
1050  FOR I=1           TO 10 :AS=INKEY$: NEXT I
1060  S%=1
2000  'Reading keyboard input
2010  'Storing inputted data inSD$ and displaying on the screen
2020  A$=INKEY$
2030  IF A$="" THEN 3020
2040  IF S%=0 THEN 2070
2050  S%=0:SD$=""
2060  IF POS(0)<>0 THEN PRINT
2070  I=ASC(A$)
2080  Storing the input of 43(+) to 90(Z) by ASCII codes in SD$
2090  IF I<43 OR I>90 THEN 2120
2100  PRINT A$;:SD$+A$:GOTO 2020
2110  'BS, <, When the DEL key is pressed, a letter before that is cancelled.
2120  IF I<>8 AND I<>29 AND I<>127 THEN 2190
2130  IF LEN(SD$)=0 THEN 2020
2140  SD$=LEFT$(SD$,LEN(SD$)-1)
2150  I=POS(0):J=CSRLIN:I=I-1:IF I=-1 THEN I=79:J=J-1
2160  LOCATE I,J:PRINT" ";:LOCATE I,J:GOTO 2020
2170  'Transmitting a command to the monitor
2180  'After pressing "CR", transmit SD$ to RS-232C port
2190  IF I<>13 THEN 2020
2200  PRINT #1,SD$
2210  SD$="":GOTO 2020
3000  'Receiving the data sent back from the monitor
3010  'After receiving data from RS-232C port, the data is displayed on the screen.
3020  IF LOC(1)=0 THEN 2020
3030  IF S%=1 THEN 3070
3040
3050  IF POS(0)<>0 THEN PRINT
3060  S%=1
3070  A$=INPUT$(1,#1)
3080
3090  IF ASC(A$)=13 THEN 3020
3100  PRINT A$;:GOTO 3020
9000  'When the STOP key is pressed, the RS-232C port is closed.
```

- Make the above program, input commands to the monitor, and press the RETURN key.
- The data sent from the monitor is displayed on the monitor screen connected to the personal computer.
- See page 30-31 for Commands and Response data codes.

CAUTION:

- This program is based on N88-BASIC. Change programs if using other types of personal computers.

8. INPUT/OUTPUT SIGNAL SPECIFICATIONS

1. COMPOSITE VIDEO SIGNAL

(1) INPUT

- Connectors
- BNC/RCA type (Front terminal)
- S-Terminal
- Input voltage 1.0Vp-p ±10%
- Input impedance:75Ω
- Signal polarity: Positive Sync:Negative

(2) SCANNING FREQUENCY

	NTSC	PAL/SECAM
Horizontal:	15.734kHz	15.625kHz
Vertical:	59.94Hz	50Hz

(3) OUTPUT

- Connectors
- BNC Type
- Output voltage: 1.0Vp-p
- Output impedance:75Ω



S-terminal

2. RGB TTL SIGNAL

(1) INPUT

- Connectors
- D-SUB 9 PIN



D-SUB 9 pin

① RGB VIDEO SIGNAL

- Input voltage: Low level: 0-0.4V
High level: 2.7-5.0V
- Input impedance: 470Ω pull down
- Input current: -20mA max.
- Signal polarity: Positive

② SYNC. SIGNALS

- Input voltage: Low level: 0-0.4V
High level: 2.7-5.0V
- Input impedance: 1kΩ pull down
- Input current: Separate or Composite
- Signal polarity: Both polarities available

③ SCANNING FREQUENCY:Automatic Synchronization

- Horizontal: 15.7/20-35.0kHz
- Vertical: 45-120Hz

D-SUB 9 PIN ASSIGNMENT AND SIGNAL LEVEL

1) COLOR GRAPHICS TTL 8/16/64 COLORS

PIN NO.	8 COLORS	16 COLORS	64 COLORS	POLARITY
1	GND	GND	GND	
2	Unused	Unused	Secondary Red Video	TTL Positive
3	Red Video	Red Video	Primary Red Video	TTL Positive
4	Green Video	Green Video	Primary Green Video	TTL Positive
5	Blue Video	Blue Video	Primary Blue Video	TTL Positive
6	Unused	Intensity	Intensity/Secondary Green Video	TTL Positive
7	Unused	Unused	Primary Red Video	TTL Positive
8	Horizontal Sync./Composite Sync.	Horizontal Sync./Composite Sync.	Horizontal Sync./Composite Sync.	TTL Positive/Negative
9	Vertical Sync.	Vertical Sync.	Vertical Sync.	TTL Positive/Negative

16/64 DISPLAY COLORS ACCORDING TO SYNC. SIGNAL POLARITY

DISPLAY COLORS	SYNC. SIGNAL POLARITY	
	HORIZONTAL SYNC.	VERTICAL SYNC.
16 Colors	Positive	Positive
	Negative	Negative
64 Colors	Positive	Negative

D-SUB 15 PIN ASSIGNMENT AND SIGNAL LEVEL

PIN NO.	SIGNAL	POLARITY
1	Red Video	0.7V _{P-P} , 75Ω Positive
2	Green Video	0.7V _{P-P} , 75Ω Positive
3	Blue Video	0.7V _{P-P} , 75Ω Positive
4	Unused	
5	Unused	
6	Red GND	
7	Green GND	
8	Blue GND	
9	Unused	
10	GND	
11	Unused	
12	Unused	
13	Horizontal Sync./Composite Sync.	TTL Positive/Negative
14	Vertical Sync.	TTL Positive/Negative
15	Unused	

3. RGB ANALOG SIGNAL

(1) Input

- Connectors
- BNC Type (RGB 1)
- D-SUB 15Pin (RGB 2)

1 RGB VIDEO SIGNAL

- Input voltage: 0.7Vp-p
- Input impedance: 75Ω
- Signal polarity: Positive

② SYNC. SIGNALS

- Input voltage:

TTL leve

Low level: 0-0.4V

High level: 2.7-5.0V

ANALOG level

0.3 – 1.0Vp-p (only composite sync signal)

10k Ω pull down

Separate/Com

Both polarities available

Both polarities available

③ SCANNING FREQUENCY : Automatic Synchronization

Horizontal: 15.7/20-64.0 kHz

Horizontal: 13.7720 s
Vertical: 45-120Hz

(2) Output

- Connector BNC Type/
D-SUB 15 pin R/G/B/H/V
- Output voltage: 0.7Vp-p
- Output impedance: Select 75Ω /HIGH of IMPEDANCE SELECT SWITCH



RCA Type

CONNECTING OF SPEAKER CORD

4. AUDIO SIGNAL

(1) Input

- Connectors
- RCA JACK <RGB AUDIO> is used as <RGB1>, <RGB2>, and <RGB3>
- Input level: 473mVrms
- Input impedance 47kΩ or more

(2) Output

• Connector

RCA JACK AUDIO Through out

Select out variable

- Output level: 473mVrms
- Output impedance 4.7kΩ or less

(2) Speaker Output

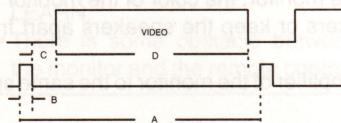
Speaker terminal

- Rated output: 5W+5W
- Output impedance 8Ω

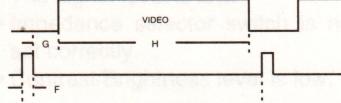
5. TIMING CHART

SEPARATE

HORIZONTAL



VERTICAL



Sync. Polarity : Positive/Negative

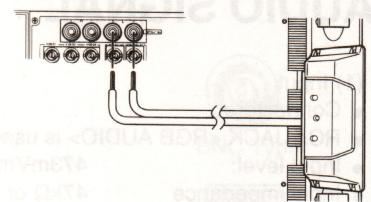
TIMING EXAMPLE

	fH	21.8kHz	31.47kHz	35.28kHz	48.78kHz
HORIZONTAL	A μ s	45.75	31.78	28.34	20.1
	B μ s	4.92	3.81	2.0	1.12
	C μ s	1.65	1.9	3.37	3.8
	D μ s	39.31	25.42	21.18	15.46
VERTICAL	E line	366	525	525	667
	F line	13	2	3	3
	G line	2	32	39	39
	H line	350	480	480	624

9. SPEAKERS INSTALLATION

CONNECTING OF SPEAKER CORD

① Twist the strands at the end of the lead wires.



② To connect the SPEAKER OUTPUT of the monitor to the left speaker, loosen the black terminal <L-> of SPEAKER OUTPUT, install the twisted lead wire into the hole, and tighten the lever to lock the wire into place.

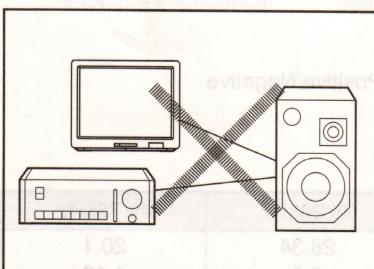
③ Loosen the red terminal <L+> of SPEAKER OUTPUT, install the twisted lead wire into the hole, and tighten the lever to lock the wire into place.

④ Connect the right speaker to the monitor the same method as above.

⑤ Gently pull the wires to make sure that the wires are locked into place.

NOTE:

- Make sure the speaker wire is inserted up to the wire insulation of the hole.
- Connect lead wires to <SPEAKER OUTPUT> of the monitor as indicated above.
- When installing the external speakers to the monitor, use the speaker of impedance 8Ω or more and rated input 5W or more.
- When the external speaker is put close to the monitor, the color of the monitor screen will be affected by the speaker. Use the impurity-protected speakers or keep the speakers apart from the monitor so that color impurity may not occur.
- Connecting the speaker output and stereo amplifier of the monitor to the same speaker in parallel will damage the monitor. Do not connect in that way.
- Do not use the monitor's speaker in combination with audio amplifier.



VERTICAL		HORIZONTAL	
LINE	LINE	LINE	LINE
E	F	G	H
36	36	36	36
38	38	38	38
480	480	480	480
482	482	482	482
5	5	5	5
8	8	8	8
13	13	13	13
25	25	25	25
38	38	38	38
58	58	58	58
82	82	82	82
108	108	108	108
138	138	138	138
168	168	168	168
198	198	198	198
228	228	228	228
258	258	258	258
288	288	288	288
318	318	318	318
348	348	348	348
378	378	378	378
408	408	408	408
438	438	438	438
468	468	468	468
498	498	498	498
528	528	528	528
558	558	558	558
588	588	588	588
618	618	618	618
648	648	648	648
678	678	678	678
708	708	708	708
738	738	738	738
768	768	768	768
798	798	798	798
828	828	828	828
858	858	858	858
888	888	888	888
918	918	918	918
948	948	948	948
978	978	978	978
1008	1008	1008	1008
1038	1038	1038	1038
1068	1068	1068	1068
1098	1098	1098	1098
1128	1128	1128	1128
1158	1158	1158	1158
1188	1188	1188	1188
1218	1218	1218	1218
1248	1248	1248	1248
1278	1278	1278	1278
1308	1308	1308	1308
1338	1338	1338	1338
1368	1368	1368	1368
1398	1398	1398	1398
1428	1428	1428	1428
1458	1458	1458	1458
1488	1488	1488	1488
1518	1518	1518	1518
1548	1548	1548	1548
1578	1578	1578	1578
1608	1608	1608	1608
1638	1638	1638	1638
1668	1668	1668	1668
1698	1698	1698	1698
1728	1728	1728	1728
1758	1758	1758	1758
1788	1788	1788	1788
1818	1818	1818	1818
1848	1848	1848	1848
1878	1878	1878	1878
1908	1908	1908	1908
1938	1938	1938	1938
1968	1968	1968	1968
1998	1998	1998	1998
2028	2028	2028	2028
2058	2058	2058	2058
2088	2088	2088	2088
2118	2118	2118	2118
2148	2148	2148	2148
2178	2178	2178	2178
2208	2208	2208	2208
2238	2238	2238	2238
2268	2268	2268	2268
2298	2298	2298	2298
2328	2328	2328	2328
2358	2358	2358	2358
2388	2388	2388	2388
2418	2418	2418	2418
2448	2448	2448	2448
2478	2478	2478	2478
2508	2508	2508	2508
2538	2538	2538	2538
2568	2568	2568	2568
2598	2598	2598	2598
2628	2628	2628	2628
2658	2658	2658	2658
2688	2688	2688	2688
2718	2718	2718	2718
2748	2748	2748	2748
2778	2778	2778	2778
2808	2808	2808	2808
2838	2838	2838	2838
2868	2868	2868	2868
2898	2898	2898	2898
2928	2928	2928	2928
2958	2958	2958	2958
2988	2988	2988	2988
3018	3018	3018	3018
3048	3048	3048	3048
3078	3078	3078	3078
3108	3108	3108	3108
3138	3138	3138	3138
3168	3168	3168	3168
3198	3198	3198	3198
3228	3228	3228	3228
3258	3258	3258	3258
3288	3288	3288	3288
3318	3318	3318	3318
3348	3348	3348	3348
3378	3378	3378	3378
3408	3408	3408	3408
3438	3438	3438	3438
3468	3468	3468	3468
3498	3498	3498	3498
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3558	3558	3558	3558
3588	3588	3588	3588
3618	3618	3618	3618
3648	3648	3648	3648
3678	3678	3678	3678
3708	3708	3708	3708
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3888	3888	3888	3888
3918	3918	3918	3918
3948	3948	3948	3948
3978	3978	3978	3978
4008	4008	4008	4008
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4068	4068	4068	4068
4098	4098	4098	4098
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4158	4158	4158	4158
4188	4188	4188	4188
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4548	4548	4548	4548
4578	4578	4578	4578
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4788	4788	4788	4788
4818	4818	4818	4818
4848	4848	4848	4848
4878	4878	4878	4878
4908	4908	4908	4908
4938	4938	4938	4938
4968	4968	4968	4968
4998	4998	4998	4998
5028	5028	5028	5028
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5088	5088	5088	5088
5118	5118	5118	5118
5148	5148	5148	5148
5178	5178	5178	5178
5208	5208	5208	5208
5238	5238	5238	5238
5268	5268	5268	5268
5298	5298	5298	5298
5328	5328	5328	5328
5358	5358	5358	5358
5388	5388	5388	5388
5418	5418	5418	5418
5448	5448	5448	5448
5478	5478	5478	5478
5508	5508	5508	5508
5538	5538	5538	5538
5568	5568	5568	5568
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8148	8148	8148	8148
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8208	8208	8208	8208
8238	8238	8238	8238
8268	8268	8268	8268
8298	8298	8298	8298
8328	8328	8328	8

10. TROUBLESHOOTING

Problem	Cause	Correction
The power does not switch on.	<ul style="list-style-type: none"> The power cord is not plugged into power inlet. 	Plug the power cord into power inlet.
No picture appears on the screen.	<ul style="list-style-type: none"> Input signal is not selected. Sync. signal is not inputted. Horizontal frequency is beyond the limits. Impedance selector switch is not set correctly. 	<ul style="list-style-type: none"> Set the input signal correctly. Check the connection and make sure of the signal level. Set the impedance selector switch correctly.
Synchronization is incorrect.	<ul style="list-style-type: none"> Sync. signal is not inputted. The signal level is not appropriate. Impedance selector switch is not set correctly. 	<ul style="list-style-type: none"> Check the connection. Input the correct level. Set the impedance selector switch correctly.
The remote control doesn't work.	<ul style="list-style-type: none"> The batteries are not installed. The ID number is set. Check that the SELECT button is set to monitor. The NORM/LEARN switch is set to LEARN. There is some obstacle between the monitor and the remote control. 	<ul style="list-style-type: none"> Check that the batteries are installed correctly. See page 26. Set the SELECT button to MONITOR. Set the switch to "NORM". Remove the obstacle between the monitor and the remote control.
• The picture is dark.	<ul style="list-style-type: none"> The signal level is low. Impedance selector switch is not set correctly. Contrast/Brightness level is low. 	<ul style="list-style-type: none"> Input the correct level. Set the impedance selector switch correctly. Adjust the Contrast/Brightness correctly.
There's no color of picture.	<ul style="list-style-type: none"> System is not set correctly. BLUE ONLY is set to "ON". 	<ul style="list-style-type: none"> See page 21. See page 21.
There's no sound.	<ul style="list-style-type: none"> The volume level is set to minimum. Speaker is not connected. Sound is turned off by pressing MUTE button. 	<ul style="list-style-type: none"> Turn up the volume level. Connect the speaker. Press the MUTE button again.

9. SPEAKERS INSTALLATION

CONNECTING OF SPEAKER CORD

Problem	Cause	Correction
The picture is colored.	<ul style="list-style-type: none"> The screen is magnetized. Purity is not adjusted correctly. 	<ul style="list-style-type: none"> Press the DEGAUSS button to discharge the magnetism. See pages 5,7.
You have forgotten the ID number.		<ul style="list-style-type: none"> Press the DISPLAY button. See pages 5,7.
The monitor turned off.	<ul style="list-style-type: none"> AUTO POWER OFF is set. 	<ul style="list-style-type: none"> Press the "DISPLAY" button. See pages 5,7.
The input select switch button is not available.	<ul style="list-style-type: none"> The menu is displayed. 	<ul style="list-style-type: none"> Exit from the menu mode.

When one of the following messages is displayed on the screen, turn off the main power switch immediately and contact your dealer.

FAN STOP

FAN is stopped.
The monitor turns off within 30 seconds automatically.

OVER HEAT

Temperature inside the monitor is too high.
The monitor turns off within 15 seconds automatically.

11. SPECIFICATION

CRT:

Viewable measurement: 40 inches
Deflection angle: 110 deg.
Shadow mask: 0.96mm-1. 1mm Stripe pitch (Invar mask)
Faceplate: Tinted glass
Phosphor: B22 (Medium-short persistence)

POWER SUPPLY: AC 120V, 60Hz

POWER CONSUMPTION: 350W

AUDIO OUTPUT: 5W x 5W

DISPLAY AREA: 780(H) x 580(V) mm

RESOLUTION: RGB mode: 800(H) dots x 768 (V) lines mm
Composite mode :600 lines

DIMENSIONS: 970(W) x 806(H) x 689(D) mm

WEIGHT: 125kg (276 lbs.)

SPEAKERS

Impedance: 8Ω
Rated input: 15W max.

- Design and specifications are subject to change without notice.

※ IBM®PC/AT, PS/2 is a registered trade mark of International Business Machines Corporation.

※ Apple MAC-II is a registered trade mark of Apple Computer Inc..

RETAIN THIS PORTION OF THE CARD FOR YOUR RECORDS

MODEL NO. AM-4201R

SERIAL NO. 100154

CUSTOMER NAME	DEALER
STREET ADDRESS	PURCHASE DATE
CITY	STATE ZIP

When requesting warranty service, please present this portion of the card to
your authorized MITSUBISHI Service Center.



851B991B2

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